DOE/EH-413-0202

Regional Success Stories

Mound Site: Integration of CERCLA and Real Estate Processes to Transfer Land for Economic Development

June 2002

The U.S. Department of Energy (DOE) is in the process of cleaning up the Mound Site, with the mission of transferring land for economic redevelopment. As part of this mission, DOE has identified the future landlord of the site: the Miamisburg Mound Community Improvement Corporation (MMCIC), a not-for-profit corporation. After selling the Mound Plant in January 1998 to the MMCIC, under the authority of the Atomic Energy Act of 1954, Section 161(g), DOE was challenged with determining the process for transferring the site. DOE successfully completed transfer of its first parcel of land to the MMCIC in March 1999.

Introduction

Before a parcel of land can be transferred, DOE must meet the requirements of two separate but interrelated processes: that of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and that of real estate due diligence. Under the CERCLA process, DOE must complete environmental remediation activities, and the regulators of DOE-Miamisburg Environmental Management Project (referred to as DOE-MEMP) – i.e., the United States Environmental Protection Agency (USEPA) and the Ohio Environmental Protection Agency (OEPA) – which comprise Mound's "core team,"[1] must concur that a parcel of land (known as a "release block") is protective of human health and the environment under an industrial land use scenario. Concurrently, DOE must complete real estate activities and evaluations required to legally transfer the land.

Following transfer of the first release block, DOE-MEMP identified opportunities to improve the coordination and efficiency of the CERCLA and real estate processes. This fact sheet documents DOE-MEMP's land transfer approach and lessons learned to assist other DOE personnel responsible for land transfer activities.

Establishing a Management Approach

Identifying Mission Objectives and Organizational Priorities
DOE-MEMP recognized that participation of its regulatory agencies, the MMCIC, and technical support throughout the land transfer process was necessary to successfully transfer a release block. Initially, DOE-MEMP and the MMCIC established their working relationship by signing a Memorandum of Agreement to work collaboratively, with each other and with DOE's regulators, seeking methods to minimize costs associated with site cleanup while maintaining integrity of the environment. Once their working relationship was established, DOE-MEMP and the MMCIC defined the following mission objectives for land transfer:

- Reasonably anticipated future reuses based on the site's industrial land use scenario designation;
- Building and infrastructure end-states, i.e., whether existing structures remain in place or are demolished; and
- Priority for parcel transfer and facilities demolition.

Establishing these objectives required the DOE-MEMP and the MMCIC to identify their priorities for land transfer, specifically:

- MMCIC's economic development requests (e.g., timing of land transfer to coincide with reuse options; amenability of site facilities to accommodate reuse options).
- MMCIC's financial considerations: MMCIC receives some of its funding for economic redevelopment from grants, which often require MMCIC to have possession of the land at the time the grant is awarded.
- DOE's current operational requirements, e.g., DOE operations cannot cease until after x period of time.
- DOE's cleanup obligations, i.e., DOE must take the appropriate actions to ensure that land transferred is protective of human health and the environment for its intended use prior to transfer.

By understanding each organization's requirements and preferences, DOE-MEMP and MMCIC were able to identify any conflicting priorities and begin resolving those differences. These mission goals and organizational priorities provided the building blocks for developing a parcel transfer plan and facilities demolition schedule meeting, to the greatest extent possible, the objectives of both organizations. In addition, DOE-MEMP and the MMCIC were able to define the expected conditions associated with each land parcel and uncertainties having the potential to impact the transfer date (e.g., DOE operations do not cease when scheduled).

Identifying Land Transfer Requirements
Since Mound had yet to transfer a parcel of land, DOE-MEMP developed working groups, consisting of subject matter experts from the areas of real estate, safety analysis, and environmental restoration to identify the necessary decisions

[1] The core team consists of individuals with decision-making authority, including DOE, USEPA, and State remedial project managers, working together to reach agreement on key remediation decisions. See related fact sheet, *Expediting Cleanup through a Core Team Approach*, DOE/EPA's Principles of Environmental Restoration Workshop.

and activities associated with the CERCLA and real estate processes to transfer land. DOE-MEMP and the MMCIC relied on these technical experts for support in establishing priorities for transfer, and throughout the land transfer decision-making process.

The Mound Land Transfer Process decision flow diagram and supporting text can be accessed at the following web address: http://www.doe-md.gov/.

Defining Interrelationships Between the CERCLA and Real Estate Decision-Making Processes

Defining the Release Block Boundary

Although for the most part the CERCLA and real estate processes can function independently, DOE-MEMP realized that there were key junctures, where decisions made in each process impacted the other process (i.e., those decisions where without coordination between the two processes, DOE-MEMP cannot move forward without increasing the risk of rework). DOE-MEMP identified that finalizing the release block boundary was a key decision, as it provides a basis for completing all subsequent decisions and activities associated with real estate transactions and CERCLA.

The release block boundaries were originally defined based on the CERCLA process, i.e., DOE-MEMP used professional judgment to make assumptions about when remedial action would be complete and which parts of the site would be needed for continued operations. As the first step in the land transfer process[2], these "historic" boundaries were updated, based on current information (e.g., change in future owner desires for reuse, change is remedial activities scheduled) and professional judgment, including:

1) *Needs based on ongoing environmental restoration activities* in the release block to be transferred and other release blocks (e.g., monitoring, physical space for equipment or waste storage);
2) *Previous environmental actions*; e.g., if removal actions at a potential release site demonstrates that the contamination associated with a PRS extended further than anticipated in a lateral direction, DOE-MEMP decide to modify the boundary so that the PRS is not split into two release blocks.
3) *MMCIC requests to transfer buildings and/or land* earlier based on economic redevelopment possibilities (to be accommodated, if possible).

Following initial definition of the preferred release block boundary, DOE-MEMP recognized that evaluations that may result in a decision to modify the boundary needed to be conducted as early as possible in the land transfer process. Using subject matter experts, DOE-MEMP identified the real estate evaluations (i.e., challenges to land transfer) to be conducted in order to reach concurrence on a final boundary (see Highlight 1).

HIGHLIGHT 1: Example Complications to Land Transfer

Infrastructure – Access to Roadways and Parking Lots. If the release block includes roads or parking lots, and DOE-MEMP determines they will require access for reasons such as waste transfer, security, utilities, and emergency management, DOE may stipulate access in the deed or a temporary access easement and negotiate with MMCIC responsibility for road and parking lot maintenance.

Cultural Resource Management – Historically Significant or Sacred Resources. If the release block contains historically significant resources, DOE-MEMP discloses their presence to MMCIC and identifies any related restrictions in the deed or an easement.

Land Management Issues – Wetlands. Per 10 CFR 1022, DOE must determine if a jurisdictional wetland is located within the release block and disclose this information to the MMCIC. If a wetland is located in the release block, MMCIC will not be permitted to disturb this land without the required approval and permits.

Environmental Monitoring and Permit Requirements – Air and Ground Water Monitoring. If DOE-MEMP, USEPA, or Ohio EPA determines that continued access to the ground water monitoring wells or air monitoring stations located on the release block is required, DOE-MEMP may stipulate these access requirements in the deed for the property or a temporary access easement.

Security Requirements – Site Access. If a release block transfer diminishes site security on the perimeter, DOE-MEMP may require MMCIC to build a fence or guard post to ensure the area remains inaccessible to unauthorized individuals.

Safety Analysis – Emergency Management. If DOE-MEMP determines there is an increased risk to the public or to the general employees if the parcel is transferred, DOE-MEMP and the MMCIC must assess the current system for addressing site-wide hazards and emergencies and determine if the land transfer diminishes their abilities to response to emergency situations. DOE-MEMP may need to modify their emergency management protocol; or MMCIC may need to coordinate training and education of City emergency management crews so that they can respond to possible future emergencies at the site.

Environmental Remediation – Un-assessed PRSs. If DOE-MEMP, USEPA, or Ohio EPA determines that a PRS outside of the parcel boundary poses a potential contaminant migration risk to that parcel, they may decide to address that PRS prior to parcel transfer, or put in place additional monitoring requirements.

The requirements identified through the above evaluations must be addressed by modifying the release block boundary or some other approach (e.g., changing safety protocols) so that

[2] For Mound, the land transfer process begins at the point where the core team has evaluated all potential release sites (i.e., PRSs) and buildings with a release block, all required actions designated by the core team have been completed, and the core team has determined that no further action is required at any PRSs or building within the defined release block, pending final evaluation of cumulative residual risk effects. If DOE-MEMP modifies the boundary, resulting in the release block containing PRSs or buildings that have not been designated as no-further-assessment by the core team, DOE-MEMP is not ready to begin the land transfer process. At any point in the land transfer process, DOE-MEMP may determine that the land should not be transferred due to unacceptable risks to the public or prohibitive costs.

final CERCLA evaluations can proceed. Likewise, DOE-MEMP recognized that the approach chosen to address a requirement from one evaluation could impact another evaluation. Therefore, coordination between the various evaluation teams is essential for identifying interrelationships between the different challenges to land transfer. For example, if a release block boundary contains a ground water monitoring well and DOE-MEMP is required to collect samples, then DOE-MEMP will need to maintain access after parcel transfer. This decision affects both infrastructure (i.e., DOE-MEMP must determine if continued access to the area will be impeded by release block transfer) and environmental monitoring / permit requirements issues (i.e., ground water wells are located in the release block and therefore DOE-MEMP will need to stipulate an access requirement in the deed or a Temporary Access Easement to maintain access).

Identifying Residual Contamination
DOE-MEMP and its regulators enhanced their process for implementing CERCLA to better accommodate the land transfer process by incorporating the following two activities prior to initiating any formal residual risk evaluation:

- *Publicizing the Release Block Boundary for Employee Comments*: Although DOE-MEMP previously requested employee input on historical and antidotal knowledge about the environmental conditions associated with PRSs and buildings located within each release block, in some cases, it had been years since this initial request for information (e.g., during site investigation phase). When the first parcel of land was ready for transfer, an employee came forward with additional information that indicated the land was contaminated. As a result, additional evaluations were required prior to release of the land. To prevent the rework associated with this situation, DOE-MEMP and its regulators recognized the need to make another request, early in the land transfer process, for any information from employees that might lead DOE-MEMP and its regulators to believe the land might not be ready for transfer.
- *Conducting a Qualitative Residual Risk Evaluation (RRE):* After the release block boundary is finalized, a formal (i.e., quantitative) RRE is required to substantiate that environmental conditions are protective of human health and the environment for intended use. If the formal RRE indicates additional environmental problems exist, -- whether DOE-MEMP decides to address these problems immediately or modify the release block boundary and conduct remediation activities later -- DOE-MEMP will be required to conduct another quantitative evaluation. To prevent the rework associated with this situation, DOE-MEMP and its regulators decided to conduct a *qualitative* evaluation prior to finalizing the release block boundary to determine if further action, due to an unacceptable risk to human or ecological receptors, is likely. This qualitative evaluation is based on a review of existing information for the release block and is less resource intensive than the formal RRE. This review is used to indicate if the combined residual risk from multiple, no-further-assessment PRSs will likely result in an unacceptable risk to human health or the environment. Because conducting a formal RRE is a time consuming and expensive process, the qualitative evaluation minimizes the possibility that DOE-MEMP will have to conduct two formal RREs.

Modifying the Release Block Boundary
DOE-MEMP recognized that changing parcel boundaries further along in the land transfer process could have significant schedule and cost impacts, such as rehiring a surveyor to legally define the boundary (i.e., metes and bounds property description), or redoing residual risk analyses. If the boundary is modified after the teams have conducted evaluations of the challenges to land transfer, re-evaluation of these considerations is necessary. These actions increase costs, delay schedules, and interfere with MMCIC's schedule requirements for obtaining the land (e.g., need land to be transferred to receive grants for economic redevelopment of the release block).

However, DOE-MEMP discovered that modifying the parcel boundary could be used to manage uncertainties and expedite land transfer. For example, as part of the environmental restoration process, DOE and its regulators may consider modifying the boundary as an option to conducting any additional (previously unforeseen) removal actions prior to land transfer. Rather than delay parcel transfer to conduct both the environmental restoration activities and the required analyses to ensure that the release block is protective of human health and the environment, DOE and its regulators may determine that it is less costly to modify the boundary of the release block and address the environmental problems in the future. Similarly, if safety evaluations show that continued DOE operations present an unacceptable risk to the public based on the new site boundaries, DOE may modify the parcel boundary to ensure a buffer zone between DOE activities and the public.

Streamlining Documentation

DOE-MEMP decided to streamline the documentation associated with its land transfer process and identified the following areas where existing documentation could be used for multiple purposes:

- *CERCLA documentation to supplement National Environmental Policy Act (NEPA) reporting*. DOE-MEMP must complete a NEPA review as required under 10 CFR 1021. DOE-MEMP determined it was appropriate to rely on the CERCLA process to meet the environmental objectives of NEPA and that the CERCLA review of actions taken could be supplemented with any additional necessary NEPA evaluation.
- *Environmental Summary (ES) to fulfill both CERCLA and real estate full disclosure requirements.* The ES describes the environmental conditions of the land proposed for transfer and thus can be used to meet CERCLA and real estate full disclosure requirements.
- *Generic language for deeds and easements.* Although DOE-MEMP is transferring parcels of land to MMCIC, some use restrictions and access agreements must remain in place – some for the short term and others in

perpetuity. DOE and MMCIC agreed to generic language to minimize the effort required to write deeds and easements, and a layered documentation approach for placing restrictions on the land to expedite their removal when they become unnecessary (see Highlight 2).

Benefits to Mound's Land Transfer Approach

Mound's land transfer approach allows DOE to reduce its mortgage costs as cleanup continues and quickly transfer property for reuse. For the surrounding community, land transfer facilitates private employment opportunities, and multiple agency, public, and private corporation cooperation and accomplishment.

Increasing Confidence in Decision-Making
Roles and responsibilities are clearly defined for DOE-MEMP, its regulators, and the MMCIC, and each party knows their purpose in the land transfer process. Since the key-decision makers are involved throughout the land transfer process, they have an increased awareness of the CERCLA and real estate processes, and how the two processes are interrelated. In addition, DOE-MEMP, its regulators, and the MMCIC are explicitly identifying uncertainties having the potential to impact the land parcel transfer date and defining contingency plans to minimize impacts should unexpected conditions be encountered. This allows DOE-MEMP to proceed forward with land transfer with a greater degree of confidence.

Minimizing Rework
Since DOE-MEMP includes the MMCIC as a key participant in the process, priorities of both organizations are identified and addressed up-front, prior to performing any activities necessary for land transfer. Because the interrelationships between CERCLA and the real estate process are now well-understood, teams working to identify and address CERCLA and real estate transfer issues can most effectively coordinate their evaluations and activities. As a result, rework is minimized since activities are focused on and performed only in support decision-making (e.g., the RRE and survey of the parcel to define metes and bounds occurs only once).

Reducing Documentation Requirements
By identifying areas where existing documentation can be used for multiple purposes, DOE-MEMP minimizes the resources and time spent to generate the documentation necessary to support land transfer.

HIGHLIGHT 2: Example Layered Approach for Imposing Restrictions

All use restrictions and access agreements that must remain in place in perpetuity are included in the *QuitClaim* deed, including:

- Restrictions on land use (i.e., land must not be used for residential use or farming; no day care facilities, schools, other educational facilities, community centers, playgrounds);
- Restrictions on ground water use (i.e., the owner is restricted from extracting, consuming, exposing or using in any way the ground water underlying the premises without prior written approval from the USEPA and OEPA);
- Restrictions regarding soil removal from the Mound 1998 site boundaries;
- DOE access to the site to conduct any needed future investigation or response action as defined under CERCLA.

All use restrictions and access agreements that are required due to continuing DOE operations are included in a *Temporary Easement*, for example:

- DOE's continued use of a transferred road for waste shipping activities;
- DOE access onto a transferred parcel to maintain utilities;
- DOE access onto a transferred parcel to monitor the contributions of new owners to DOE's permitted activities;
- DOE access to air monitoring stations.

All use restrictions and access agreements that will be required beyond the period of DOE operations at the site, but will not be required in perpetuity may be included in the deed or a *Long-Term Easement*. For example, DOE may need access to the site to conduct ground water monitoring for an extended period of time (e.g., 30 years).

FOR MORE INFORMATION PLEASE CONTACT:

Sue Smiley
United States Department of Energy, Miamisburg Environmental Management Project
1 Mound Road
PO Box 66
Miamisburg, OH 45343
(937) 865-3984

Tim Fischer
United States Environmental Protection Agency, Region 5
77 West Jackson Blvd.
Chicago, IL 60604
(312) 886-5787

Brian Nickel
Ohio Environmental Protection Agency, Office of Federal Facilities Oversight
401 East Fifth Street
Dayton, OH 45402
(937) 285-6468

Dann Bird
Miamisburg Mound Community Improvement Corporation (MMCIC)
PO Box 232
Miamisburg, OH 45343
(937) 865-4462